ENVIRONMENTAL CHEMISTS

Date of Report: March 21, 1997 Date Received: March 18, 1997 Project: Metro Grab, PO #M56568

Date Samples Extracted: March 18, 1997 Date Extracts Analyzed: March 19, 1997

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC USING METHOD 6010

Samples Processed Using Method 3005A Results Reported as mg/L (ppm)

Sample ID	<u>Chromium</u>	<u>Copper</u>	Nickel Zinc
M56568	0.46	0.49	0.44 <0.05
Method Blank	<0.05	< 0.05	<0.05 <0.05

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Date of Report: March 21, 1997 Date Received: March 18, 1997 Project: Metro Grab, PO #M56568

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 76617 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicat Result	Relative Percent Difference	Acceptance <u>Criteria</u>
Chromium	mg/L (ppm)	0.36	0.34	6	0-20
Copper Nickel Zinc	mg/L (ppm) mg/L (ppm) mg/L (ppm)	0.30 0.26 <0.05	0.29 0.27 <0.05	3 4 nm	0-20 0-20 0-20

Laboratory Code: 76617 (Matrix Spike)

	Reporting	Spike	Sample	% I	Recovery	Acceptance	Relative Percent
Analyte:	Units	Level	Result	MS	MSD	Criteria	Difference
			200				
Chromium	mg/L (ppm)	5	0.36	94	94	80-120	0
Copper	mg/L (ppm)	5	0.30	96	95	80-120	1
Nickel	mg/L (ppm)	10	0.26	93	92	80-120	1
Zinc	mg/L (ppm)	5	< 0.05	93	91	80-120	2

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recove	ry Acceptan SD Criteria	
Ala Mari	ALLES WEST STATES	Maria Milia	AND WILL		
Chromium	mg/L (ppm)	5	95	94 80-120	1
Copper	mg/L (ppm)	5	94	95 80-120	1
Nickel	mg/L (ppm)	10	95	95 80-120	0
Zinc	mg/L (ppm)	5	94	95 80-120	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

FORMS/COC

SAMPLE CHAIN OF CUSTODY

3.18.97 1Pm

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

March 21, 1997

INVOICE # 97ACU0321-1 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Grab, PO #M56568: Results of testing requested by Gerry Thompson, Project Manager for material submitted on March 18, 1997.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ \$65 per sample \$ 65.00

Amount Due \$ \$65.00

FEDERAL TAX ID #(b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

March 21, 1997

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on March 18, 1997 from your Metro Grab, PO #M56568 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson

Chemist

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Enclosures ACU0321R.DOC